Undoubtedly a willing and perseverant reader can learn a lot from this book, but the reviewer would fail in his duty if he were to recommend it for general bedtime reading.

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Proceedings of Symposia in Pure Mathematics. Vol. IX: Algebraic groups and discontinuous subgroups, edited by Armand Borel and George D. Mostow. (Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society held at the University of Colorado, Boulder, Colorado, July 5 - August 5, 1965). American Mathematical Society, Providence, R.I., 1966. vii + 426 pages. $10.20.

Extracts from the Foreword: "The present volume consists of the Institute lecture notes, in part slightly revised, and of a few papers written somewhat later. From the beginning, it was understood that a comprehensive exposition of the arithmetic aspects of algebraic groups should be the central aim of the Institute ... the papers in this book are intended to serve various purposes: to supply background material, to present the current status of the topic, to describe some basic methods, to give an exposition of more or less known material for which there is no convenient reference, and to present new results."

This book gives an exciting picture of a subject in action and bears striking witness to the fruitful interaction between the theory of algebraic groups and the disciplines of algebra, arithmetic and geometry. It will be indispensable for all who are interested in the modern developments. Perhaps one third of the articles are expository or semi-expository (and usually fairly condensed). Many unsolved problems are posed in the valuable reports on special topics. The five main subject headings, and the contributors to each are as follows.

I. Algebraic Groups, Arithmetic Groups. (A. Borel, T.A. Springer, J. Tits, F. Bruhat, N. Iwahori, T. Tamagawa, B. Kostant, H. Matsumoto, N.D. Allan). II. Arithmetic properties of algebraic groups, Adèle Groups. (T. Tamagawa, T. Ono, J.G.M. Mars, R.P. Langlands, T.A. Springer, M. Kneser, P. Cartier). III. Automorphic functions and decompositions of $L^2(G/\Gamma)$. (A. Borel, R. Godement, R.P. Langlands, I. Satake, Y. Ihara). IV. Bounded symmetric domains, Automorphic Forms, Moduli. (W.L. Baily Jr., J. Igusa, G. Shimura, M. Kuga, D. Mumford, I. Satake, W.F. Hammond, P. Cartier). V. Quotients of symmetric spaces. Deformations. (S. Murakami, H. Garland, G.D. Mostow).

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